



**Figure S1** GMR acts in *trans* at polytene position 38F. GFP fluorescence is shown for discs where GMR acts in *cis* (A) or in *trans* (B-C). The constructs carried are (A), Complete<sup>GFP</sup> alone; (B), Enhancerless construct paired with an insertion of a precursor to the Promoterless construct with a compromised promoter (see below); (C), Enhancerless paired with Complete<sup>lacZ</sup>, which carries an intact promoter. In (B), the precursor is identical to the Promoterless construct except that the hsp70 promoter flanked by loxP sites has not been excised (See Materials and Methods). Quantitative RT-PCR shows that the precursor construct expresses *lacZ* in *cis* to a level of ~5% of Complete<sup>lacZ</sup> (data not shown), indicating that the loxP sites compromise the function of the promoter. We therefore consider the expression in (B) to be analogous to that of Enhancerless paired with Promoterless.